

Attorney's Docket No. 028726-022

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

[illegible]

Group Art Unit: Unassigned

Examiner: Unassigned

Confirmation No.: Unassigned

**For: SYSTEM AND METHOD FOR
MULTIPLEXED BIOMOLECULAR
ANALYSIS**

Sir:

Enclosed is an Information Disclosure Statement and accompanying form PTO-1449 for the above-identified patent application.

- ☒ No additional fee for submission of an IDS is required.
- ☐ The fee of \$_____ as set forth in 37 C.F.R. § 1.17(p) is also enclosed.
- ☐ A statement under 37 C.F.R. § 1.97(e) is also enclosed.
- ☐ A statement under 37 C.F.R. § 1.97(e), and the fee of \$_____ as set forth in 37 C.F.R. § 1.17(p) are also enclosed.
- ☐ Charge \$_____ to Deposit Account No. 02-4800 for the fee due.
- ☐ A check in the amount of \$_____ is enclosed for the fee due.

The Director is hereby authorized to charge any appropriate fees under 37 C.F.R. §§ 1.16, 1.17 and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 02-4800. This paper is submitted in duplicate.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, LLP

Date: Oct 9/04

By: David R. Heckadon
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FIELD(IDS DATE)



Patent
Attorney's Docket No. 028726-022

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of)
Arun Majumdar et al.) Group Art Unit: 1641
Application No.: 10/715,017) Examiner: Unassigned
Filed: November 17, 2003) Confirmation No.: 3299
For: SYSTEM AND METHOD FOR)
MULTIPLEXED BIOMOLECULAR)
ANALYSIS)

**FIRST
INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure as set forth in 37 C.F.R. § 1.56,
Applicants hereby submit the following information in conformance with 37 C.F.R. §§ 1.97
and 1.98.

U.S. Patent Documents

Re 33,581	Nicoli et al.	04/30/91
4,882,627	Keesen et al.	11/21/89
5,294,804	Kajimura	03/15/94
5,372,930	Colton, et al.	12/13/94
5,427,915	Ribi et al.	06/27/95
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5,653,939	Hollis et al.	08/05/97
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5,179,324	Thundat et al.	02/17/98
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Foreign Patent Documents

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- LANG, H.P., et al., "Sequential position readout from arrays of micromechanical cantilever sensors," IBM Research Div, Zurich, Switzerland, Inst. of Physics, U of Basel, Switzerland, 3 pages
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- RAITERI, ROBERTO, et al., "Letter to the Editor," Sensors and Actuators B 61 (1999) pp. 213-217
- MC KENDRY, RACHEL, et al., "Multiple label-free biodetection and quantitative DNA-binding assays on a nanomechanical cantilever array," PNAS, July 2002, vol. 99, no. 15, pp. 9783-9788
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ZHAO, YANG, et al., "Optomechanical Uncooled Infrared Imaging System: Design, Microfabrication, and Performance," Journal of Microelectromechanical Systems, Vol. 11, No. 2, April 2002, pp. 136-146

Pursuant to 37 C.F.R. § 1.98, a copy of each of the documents cited is enclosed. However, copies of the listed U.S. patents and U.S. patent application publications are not enclosed since it is no longer required according to the July 11, 2003 waiver of the requirement for copies of cited U.S. patents and U.S. patent application publications in national patent applications filed after June 30, 2003 and international applications entering the national stage under 35 U.S.C. § 371 after June 30, 2003.

The documents are being submitted within three (3) months of the filing or entry of the national stage of this application or before the first Office Action on the merits, whichever is later. Since the documents are being filed within the time period set forth in 37 C.F.R. § 1.97(b) no fee or statement is required.

To assist the Examiner, the documents are listed on the attached form PTO-1449. It is respectfully requested that an Examiner-initialed copy of this form be returned to the undersigned.

Respectfully submitted,
BURNS, DOANE, SWECKER & MATHIS, LLP

Date: Oct 9/04

By: David R. Heckadon

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Alexandria, Virginia 22313-1404

FIRST INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Complete if Known

Application Number	10/715,017
Filing Date	November 17, 2003
First Named Inventor	Arun Majumdar et al.
Examiner Name	LEON YUN BON LUM
Attorney Docket Number	028726-022

Sheet 1 of 3

U.S. PATENT DOCUMENTS

Examiner Initials	Document Number	Kind Code (if known)	Name of Patentee or Applicant of Cited Document	Issue/Publication Date (MM-DD-YYYY)
	Re 33,581	435/7.2	Nicoli et al.	04/30/91
	4,882,627	358/166	Keesen et al.	11/21/89
	5,294,804	250/561	Kajimura	03/15/94
	5,372,930	435.6	Colton, et al.	12/13/94
	5,427,915	435/7.92	Ribi et al.	06/27/95
	5,448,399	359/372	Park et al.	09/05/95
	5,491,097	436/518	Ribi et al.	02/13/96
	5,510,481	536/120	Bednarski et al.	04/23/96
	5,653,939	422/50	Hollis et al.	08/05/97
	5,658,732	435/6	Ebersole et al.	08/19/97
	5,179,324	73/24.01	Thundat et al.	02/17/98
	5,807,758	436/526	Lee et al.	09/15/98
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	5,918,263	73/35.16	Thundat	06/29/99
	5,923,421	356/328	Rajic et al.	07/13/99
	5,929,440	250/338.1	Fisher	07/27/99
	5,955,659	73/54.01	Gupta et al.	09/21/99
	6,005,400	324/752	Thundat et al.	12/21/99
	6,016,686	73/23.2	Thundat	01/25/00
	6,030,581	422/68.1	Virtanen	02/29/00
	6,050,722	374/121	Thundat et al.	04/18/00
	6,096,559	436/147	Thundat et al.	08/01/00
	6,118,124	250/332	Thundat et al.	09/12/00
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	2002/0092340	73/24.02	Prater et al.	07/18/02
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	6,436,647	435/6	Quate et al.	08/20/02
	2003/0092016	435/6	Wiggins et al.	05/15/03

FOREIGN PATENT DOCUMENTS

Examiner Initials	Document Number	Kind Code (if known)	Country	Date of Publication (MM-DD-YYYY)	STATUS						
					Translation	Partial Translation	Eng. Lang. Summary	Search Report	IPER	Abstract	Cited in Spec
	WO 95/02180		WIPO	01/19/95							
	WO 98/50773		WIPO	11/12/98							

Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with M.P.E.P. § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

Substitute for form 1449A/PTO & 1449B/PTO			Complete if Known		
FIRST INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)			Application Number	10/715,017	
			Filing Date	November 17, 2003	
			First Named Inventor	Arun Majumdar et al.	
			Examiner Name	LEON YUN BON LUM	
Sheet	2	of	3	Attorney Docket Number	028726-022

NON-PATENT LITERATURE DOCUMENTS	
Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	ALBRECHT, T.R., et al., "Microfabrication of cantilever styli for the atomic force microscope," <u>J. Vac. Sci. Technol.</u> , A 8(4), Jul/Aug 1990, pp. 3386-3396
	BALLER, M.K., et al., "A cantilever array-based artificial nose," <u>Ultramicroscopy</u> 82 (2000) pp. 1-9, IBM Research, Switzerland
	BARNES, J.R., et al., "Photothermal spectroscopy with femtojoule sensitivity using a micromechanical device," <u>Nature</u> , Vol. 372, November 1994, pp. 79-81
	BASELT, DAVID R., et al., "A High-Sensitivity Micromachined Biosensor," <u>Proceedings of the IEEE</u> , Vol. 85, No. 4, April 1997, pp. 672-680
	BERGER, R., "Surface Stress in the Self-Assembly of Alkanethiols on Gold," <u>Science</u> , February 1997, pp. 1-4, + 4 Figs
	FRITZ, J., et al., "Translating Biomolecular Recognition into Nanomechanics," <u>Science</u> , Vol 288, April 2000, pp. 316-318
	BINH, VU THIEN, et al., "A mechanical nanosensor in the gigahertz range; where mechanics meets electronics," <u>Surface Science Letters</u> , 301 (1994) pp. L224-L228
	BRITTON, C.L., Jr., et al., "MEMS sensors and wireless telemetry for distributed systems," <u>SPIE 5th International Symposium on Smart Materials and Structures</u> , March 1998, San Diego, CA
	CLEVELAND, J.P., et al. "A nondestructive method for determining the spring constant of cantilevers for scanning force microscopy," <u>Rev. Sci. Instrum.</u> 64 (2), February 1993, pp. 403-405
	FLORIN, ERNST-LUDWIG, et al., "Adhesion Forces Between Individual Ligand-Receptor Pairs," <u>Science</u> , Vol. 264, April 1994, pp. 418-417
	GARDNER, et al., "Microsensors MEMS and Smart Devices," John Wiley & Sons, Ltd., 2001
	GIMZEWSKI, J.K., et al., "Observation of a chemical reaction using a micromechanical sensor," <u>Chemical Physics Letters</u> , Vol 217, number 5.6, January 1994, pp. 589-594
	HANSEN, KAROLYN M., et al., "Cantilever-Based Optical Deflection Assay for Discrimination of DNA Single-Nucleotide Mismatches," <u>Anal. Chem.</u> 2001, Vol. 73, No. 7, April 2001, pp. 1567-1571
	HOH, JAN H., et al., "Measuring Intermolecular Binding Forces with the Atomic-Force Microscope: The Magnetic Jump Method," <u>Chem Physics Letters</u> , Vol. 217, no. 5, 6, January 1994, pp. 1054-1055
	HOH, JAN H., et al., "Quantized Adhesion Detected with the Atomic Force Microscope," <u>Journal of the American Chemical Society</u> , Vol. 114, No. 12, June 1992, pp. 4917-4918
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